

## CLAIM AMENDMENTS

Claims 1 through 16 (canceled)

1           17. (Currently amended) A method of making a cryogenic  
2       solid ~~monopropellant-system~~ monergole propellant out of a  
3       heterogeneous liquid-solid propellant, from reactants at least one of  
4       which is an oxidizer or fuel which contains a phase that is liquid  
5       or gaseous at standard temperature, which comprises the steps  
6       of:

7           (a) incorporating at least one liquid or gaseous  
8       phase reactant in the form of a fuel or oxidizer in a solid  
9       phase structure, open pore foam, having hollow spaces which are  
10      connected to each other; and

11          (b) transforming the liquid or gaseous phase incorporated  
12      in the solid phase structure, open pore foam, having hollow spaces  
13      connected to each other by freezing the liquid or gaseous phase  
14      into a stable cryogenic solid phase below standard temperature  
15      within the hollow spaces of the solid phase structure, open pore  
16      foam, inside the combustion chamber to obtain a rocket propellant  
17      with improved storability while avoiding the need for liquid  
18      management and simultaneously eliminating need for permanent  
19      ignition thereof.

1           18. (Currently amended) The method of making a cryogenic  
2       solid ~~monopropellant-system~~ monergole propellant defined in claim

17 wherein the at least one liquid or gaseous phase reactant is an emulsion of liquid components which are not soluble in one another.

19. (Currently amended) The method of making a cryogenic solid ~~monopropellant system~~ monergole propellant defined in claim 17 wherein the at least one liquid or gaseous phase reactant is a suspension of solid components in liquid components or liquid impregnated bulk materials or packings.

20. (Canceled)

21. (currently amended) The method of making a cryogenic solid ~~monopropellant system~~ monergole propellant defined in claim [[20]] 17 wherein the open pore foam is a foam of plastic or metal.

22. (Currently amended) The method of making a cryogenic solid ~~monopropellant system~~ monergole propellant defined in claim 21 wherein the foam of plastic or metal is a polyethylene foam, a polyurethane foam, a HTBP foam, a GAP foam, an aluminum foam, a magnesium foam, a beryllium foam, or a mixture of said plastic foam and said metal foam.

23. (Currently amended) The method of making a cryogenic solid ~~monopropellant system~~ monergole propellant defined in claim 17 wherein the solid phase structure, open pore foam, having hollow spaces is a packing incorporated in a casting material and composed

5 of a polyethylene, polyurethane, HTPB, GAP, AP, aluminum, magnesium  
6 or beryllium.

1 24. (Currently amended) The method of making a cryogenic  
2 solid ~~monopropellant system~~ monergole propellant defined in claim  
3 17 wherein according to step (a) the liquid phase is incorporated  
4 in the solid phase structure by immersion and/or impregnation  
5 thereof.

1 25. (Currently amended) The method of making a cryogenic  
2 solid monergole propellant ~~monopropellant system~~ defined in claim  
3 17 wherein according to step (a) the liquid or gas phase reactant  
4 is oxygen, a hydrocarbon, hydrogen peroxide or an HEDM propellant.

1 26. (Currently amended) The method of making a cryogenic  
2 solid monergole propellant ~~monopropellant system~~ defined in claim  
3 17 wherein according to step (b) the solid ~~monopropellant~~ monergole  
4 propellant is produced by freezing liquid fuel or oxidizer.

1 27. (Currently amended) The method of making a cryogenic  
2 solid monergole propellant ~~monopropellant system~~ defined in claim  
3 26 wherein the liquid fuel or oxidizer is oxygen, a hydrocarbon,  
4 hydrogen peroxide or an HEDM propellant.

1           28. (Currently amended) The method of making a cryogenic  
2 solid monergole propellant ~~monopropellant system~~ defined in claim  
3 17 wherein according to step (a) the liquid phase is initially  
4 encapsulated, then mixed with the solid phase structure and bonded  
5 with the binder.

1           29. (Currently amended) The method of making a cryogenic  
2 solid monergole propellant ~~monopropellant system~~ defined in claim  
3 17 wherein according to steps (a) and (b) the liquid phase is  
4 encapsulated and before freezing the liquid phase, the solid phase  
5 structure is mixed therewith, and both phases are frozen together.

1           30. (Currently amended) The method of making a cryogenic  
2 solid monergole propellant ~~monopropellant system~~ defined in claim  
3 17 wherein according to step (a) combustion speed of the cryogenic  
4 solid monopropellant system is adjusted by selecting a special  
5 hollow space size in the solid phase structure.

1           31. (Currently amended) A stabilized cryogenic solid  
2 monergole propellant for a rocket motor combustion chamber equipped  
3 with an inner isolation which comprises a solid or heterogeneous  
4 quasi-monergolic fuel oxidizer combination cooled to below ambient  
5 temperature, wherein at least one reactant for preparing said  
6 propellant is in a liquid or gaseous phase at standard temperature,  
7 and at least one reactant for preparing said propellant is in a  
8 solid phase structure, open pore foam, having hollow spaces which

9 are connected to each other, arranged at an inner isolation of the  
10 combustion chamber or completely filling the latter, the solid  
11 phase structure, open pore foam, having hollow spaces completely  
12 containing the liquid or gaseous reactant cryogenically transformed  
13 and stabilized as a cryogenic solid.

1 32. (Currently amended) The stabilized cryogenic solid  
2 monergole propellant defined in claim 31 wherein the at least one  
3 reactant for preparing said monergole propellant in a liquid or  
4 gaseous phase at standard temperature is an emulsion of liquid  
5 components not soluble in one another.

1 33. (Currently amended) The stabilized cryogenic solid  
2 monergole propellant defined in claim 31 wherein the at least one  
3 reactant for preparing said propellant in a liquid or gaseous phase  
4 at standard temperature is a suspension of solid components in  
5 liquid components.

1 34. (Currently amended) The stabilized cryogenic solid  
2 monergole propellant defined in claim 31 wherein the at least one  
3 reactant for preparing said monergole propellant in a liquid or  
4 gaseous phase at standard temperature is a liquid impregnated  
5 packing.

35. (Canceled)

1                   36. (currently amended) The stabilized cryogenic solid  
2 monergole propellant defined in claim 35 wherein the open pore foam  
3 is a foam of plastic or metal.

1                   37. (Currently amended) The stabilized cryogenic solid  
2 monergole propellant defined in claim 36 wherein the foam of  
3 plastic or metal is a polyethylene foam, a polyurethane foam, a  
4 HTBP foam, a GAP foam, an aluminum foam, a magnesium foam, a  
5 beryllium foam, or a mixture of said plastic foam and said metal  
6 foam.

1                   38. (Currently amended) The stabilized cryogenic solid  
2 monergole propellant defined in claim 31 wherein the solid phase  
3 cryogenically transformed from the liquid or gaseous phase is  
4 comprised of a stable solid.

1                   39. (Currently amended) The stabilized cryogenic solid  
2 monergole propellant defined in claim 38 wherein the solid phase  
3 cryogenically transformed from the liquid or gaseous phase as a  
4 stable solid is transformed oxygen, hydrocarbons, hydrogen  
5 peroxide, or an HEDM propellant.

1                   40. (Currently amended) The stabilized cryogenic solid  
2 monergole propellant defined in claim 31 wherein the solid phase  
3 structure, open pore foam, having hollow spaces is comprised of a  
4 packing of optionally shaped individual pieces whose hollow spaces

5 are connected together in which a frozen liquid is contained as a  
6 reactant.

1 41. (Currently amended) The stabilized cryogenic solid  
2 monergole propellant defined in claim 40 wherein the frozen liquid  
3 reactant is not in homogeneous form but itself is a packing which  
4 is mixed into the hollow space of the first packing.

1 42. (Currently amended) The stabilized cryogenic solid  
2 monergole propellant defined in claim 31 wherein the solid phase  
3 structure, open pore foam, having hollow spaces is provided with a  
4 protective coating which chemically insulates the solid phase  
5 structure, open pore foam, from the reactant in the liquid or  
6 gaseous phase.